

Appl. No. 10/749,610
Amtd. dated August 17, 2005
Reply to Office action of April, 18, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 14. (canceled)

15. (currently amended) A system for dissipating heat from a semiconductor device, comprising:

a thermally conductive lid, comprising at least two cavities corresponding to at least two dies mounted on a substrate, the first die having a first thickness and the second die having a different second thickness; and

a conductive material deposited in the at least two cavities and having a melting point greater than the maximum operating temperature of the semiconductor device, the conductive [[layer]] material operable to substantially fill the space between the cavities and the dies when the lid is coupled to the substrate to form a conductive layer so the thickness of the first die and the conductive layer on top of the first die is substantially equal the thickness of the second die and the conductive layer on top of the second die.

16. (previously presented) The system of Claim 15, wherein the conductive layer is further operable to assume a liquid state when heated, the liquid state operable to distribute the conductive layer within the space between the cavities and the dies when the lid is coupled to the substrate.

17. (original) The system of Claim 15, wherein the conductive layer is a eutectic solder.

18. (original) The system of Claim 15, wherein the conductive layer is a lead-tin solder.

19. (original) The system of Claim 15, wherein the conductive layer is an indium-based solder.

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20. (original) The system of Claim 15, wherein the conductive layer is a silver-filled epoxy.
21. (original) The system of Claim 15, wherein the conductive layer is an epoxy having a thermal conductivity greater than 10 W/m-°C.
22. (previously presented) The system of Claim 15, wherein at least two dies are operable to fit inside one cavity when the lid is coupled to the substrate.
- 23 - 36. (canceled)

TI-36608 - 3